

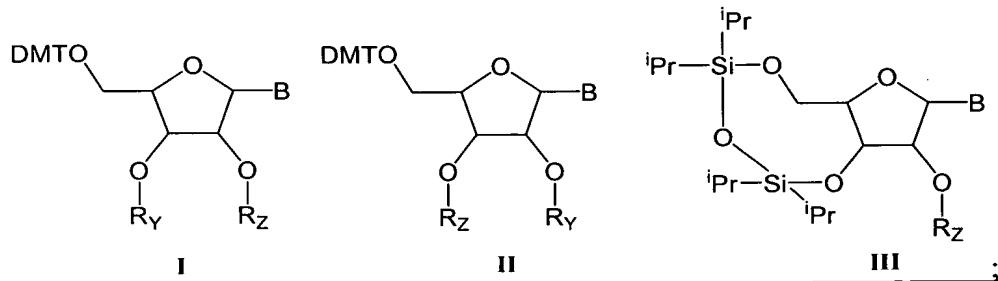
AMENDMENT TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the instant patent application.

1-31 (canceled)

32 (currently amended). A compound that has formula I, II or III:

~~A method for detecting the presence or absence of an RNA in a biological sample suspected of containing said RNA comprising contacting said sample with a compound comprising a nucleoside comprising a ribofuranosyl sugar portion and a base portion, wherein said nucleoside bears at a 2' O position or a 3' O position a substituent having formula~~



wherein

B is a naturally occurring base, a protected naturally occurring base or a synthetic base;

DMTO is -O-dimethoxytrityl;

ⁱPr is isopropyl;

_R_Y is H, a hydroxy protecting group, a phosphate group, a phosphoramidite or L-ss;

L is a linking group;

ss is a solid support medium;

_R_Z has the formula:

-R_A-N-C(X)-O-R_{1a}

or

-C(X)-N(R_{1b})(R_{1c})

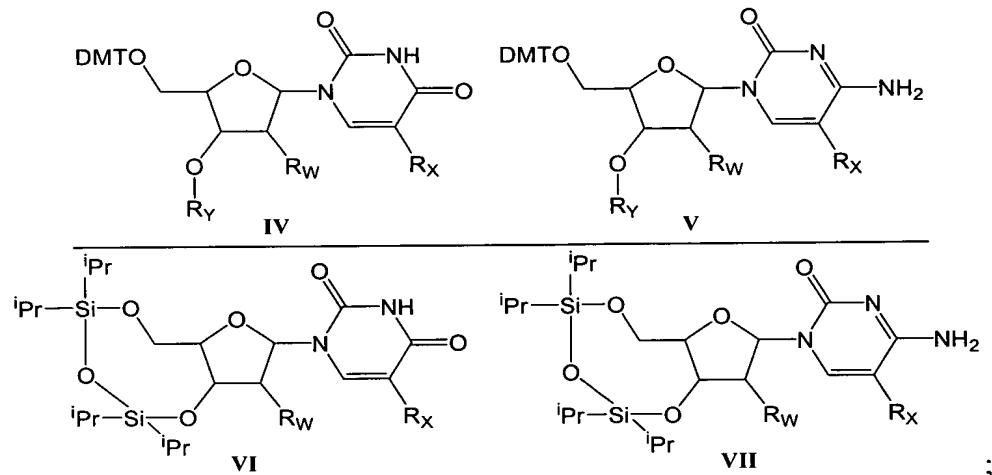
where:

R_A is alkyl having from 1 to about 10 carbon atoms or $(CH_2-CH_2-Q)_x$;
 R_{1a} is alkenyl having 2 to about 10 carbon atoms;
 R_{1b} and R_{1c} , independently, are H, R_2 , R_A , an amine protecting group or have formula $R_A-N(R_{1d})(R_{1e})$, $C(X)-R_2$, $C(X)-R_A-R_2$, $C(X)-Q-R_A-R_2$, or $C(X)-Q-R_2$;
 R_{1d} and R_{1e} , independently, are H, R_2 , R_A , an amine protecting group or have formula $C(X)-R_2$, $C(X)-R_A-R_2$, $C(X)-Q-R_A-R_2$, or $C(X)-Q-R_2$;
 R_2 is a steroid molecule, a reporter molecule, a lipophilic molecule, a reporter enzyme, a peptide, a protein, includes folic acid, or has formula $-Q-(CH_2CH_2-Q)_x-R_3$;
 X is O or S;
each Q is, independently, is NH, O, or S;
 x is 1 to about 200;
 R_3 is H, R_A , $C(O)OH$, $C(O)OR_A$, $C(O)R_4$, R_A-N_3 , or R_A-NH_2 ;
 R_4 is Cl, Br, I, SO_2R_5 or has structure:
$$-^*S \begin{array}{c} | \\ \square \\ | \end{array} (CH_2)_m ;$$

 m is 2 to 7; and
 R_5 alkyl having 1 to about 10 carbon atoms.

33 (canceled)

34 (currently amended). A compound that has formula IV, V, VI or VII:
~~A method for detecting the presence or absence of an RNA in a biological sample suspected of containing said RNA comprising contacting said sample with a compound comprising a nucleoside comprising a ribofuranosyl sugar portion and a pyrimidine base portion, wherein said base portion bears at its 5 position a substituent having formula:~~



wherein,

DMTO is -O-dimethoxytrityl;

ⁱPr is isopropyl;

R_w is H or O-R_Y;

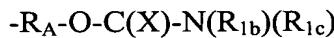
each R_Y is independently H, a hydroxy protecting group, a phosphate group, a phosphoramidite or L-ss;

wherein if R_w is $O-R_y$ then at least one R_y is H or a hydroxy protecting group;

L is a linking group;

ss is a solid support medium;

R_x has the formula:



where:

R_A is alkyl having from 1 to about 10 carbon atoms or $(CH_2-CH_2-Q)_x$;

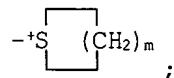
R_{1b} and R_{1c} , independently, are H, R_2 , R_A , an amine protecting group or have formula $R_A-N(R_{1d})(R_{1e})$, $C(X)-R_2$, $C(X)-R_A-R_2$, $C(X)-Q-R_A-R_2$, or $C(X)-Q-R_2$;

R_{1d} and R_{1e} , independently, are H, R_2 , R_A , an amine protecting group or have formula $C(X)-R_2$, $C(X)-R_A-R_2$, $C(X)-Q-R_A-R_2$, or $C(X)-Q-R_2$;

R₂ is a steroid molecule, a reporter molecule, a lipophilic molecule, a reporter enzyme, a peptide, a protein, includes folic acid, or has formula -Q-(CH₂CH₂-Q-)_x-R₃;

X is O or S;

each Q is, independently, is NH, O, or S;
x is 1 to about 200;
R₃ is H, R_A, C(O)OH, C(O)OR_A, C(O)R₄, R_A-N₃, or R_A-NH₂;
R₄ is Cl, Br, I, SO₂R₅ or has structure:



m is 2 to 7; and
R₅ alkyl having 1 to about 10 carbon atoms.